From:	PETERSON Jenn L
To:	Robert Gensemer; chris.thompson@eiltd.net; Eric Blischke/R10/USEPA/US@EPA; Joe Goulet/R10/USEPA/US@EPA; Chip Humphrey/R10/USEPA/US@EPA; Jeremy_Buck@fws.gov
Subject:	RE: Fw: UCR fish sampling design statistics from John Skalski(UW statistician)
Date:	02/15/2006 01:43 PM

I thought the purpose of the document sent around was to show how to determine individual fish variability from composite concentrations (one of our other data needs for getting individual fish). The text states "while individual fish will not be analyzed, careful compositing will preserve some of the information on between-fish variability in contaminant concentrations". I think to meet various objectives we should understand composite variability (something we have also discussed at length). I believe that individual variability in composites will be reduced by compositing fish over more relevant home range areas (and exposure hence exposure areas) for fish such as smallmouth bass (e.g. one side of the river, etc.). Right now the composites are means, but likely have individuals within that composite with a high variability in concentration. This answers the composite variability question by not the fish size variability question. Right now we have data from Round 1 that targeted one narrow size of fish size for the composites, with no information on contaminant levels in fish larger or smaller. Given that there were a lot of fish caught and released during the round 1 fish effort than were larger than the identified composite range, we do not have good information on contaminant levels in larger fish (or smaller). In Centralia, we talked through a plan that looked at smallmouth bass size range contaminant variation would be address this question (which is captured in Jeremy's e-mail). Because of their small home range, exposure could be kept relatively constant while we varied SIZE to assessed differences.

-Jennifer

> -----Original Message-----
> **From:** Robert Gensemer [mailto:rgensemer@parametrix.com]
> **Sent:** Wednesday, February 15, 2006 11:45 AM
> **To:** PETERSON Jenn L; chris.thompson@eiltd.net; Blischke.Eric@epamail.epa.gov; Goulet.Joe@epamail.epa.gov; Humphrey.Chip@epamail.epa.gov; Jeremy_Buck@fws.gov
> **Subject:** Re: Fw: UCR fish sampling design statistics from John Skalski(UW statistician)
>
> Joe: Thanks for sending this.
>
> I've always thought that a formal, statistically-based design would be preferrable in helping identifiy numbers of samples needed for critical data needs. However, the kind of design used for UCR would only be relevant to PH *IF* we were to change our proposal to quantify differences in fish tissue concentrations between particular sub-sections or reaches within the ISA, rather than an ISA-wide analysis as has been done to date. We talked about this some last week in Centralia, but as a group I think we decided to hold off on such a design until we saw what the FWM data needs really were.
>
> At this time, my best understanding from new converations with Bruce is that the FWM would be best served by having composite tissue samples in each of the main river reaches, rather than individual fish samples or, perhaps, replicated composite samples. The original design as mapped out a few weeks ago does do this. So, no statistics would be needed, really.
>
> So which direction do we want to take here? At the moment, the SOW document reflects the latter, non-replicated design. If instead we want to go for a replicated design to compare fish tissue concentrations in sub-sections of the ISA, we need to have additional discussions as to the AOPCs of most interest with respect to the ERA and RI/FS, statistical power we want, etc. etc.
> -Bob
>
> **********
> Robert W. Gensemer, Ph.D.
> Parametrix, Inc.
> 33972 Texas Street SW
> Albany, OR 97321
> T 541-791-1667, x-6510
> F 541-791-1669

C 541-760-1511
rgensemer@parametrix.com
****

>>> <Goulet.Joe@epamail.epa.gov> 2/15/2006 10:36:34 AM >>>

----- Forwarded by Joe Goulet/R10/USEPA/US on 02/15/2006 10:33 AM -----

Burt Shephard/R10/USEPA/US 02/15/2006 10:09 AM	To	Joe Goulet/R10/USEPA/US@EPA
	cc	
	Subject	UCR fish sampling design statistics from John Skalski (UW statistician)

Joe,

There are two drafts of the statistical methods used on the Upper Columbia River site fish sampling that took place last summer. You'll be able to see how the sampling evolved from the differences between the two documents, both of which have dates on the title page.

(See attached file: Recommended Design and Analysis for UCR Fish Tissue Sampling Program.doc)(See attached file: Preliminary Appraisal of UCR Fish Tissue Sampling Plan.doc)

Best regards,

Burt Shephard
Risk Evaluation Unit
Office of Environmental Assessment (OEA-095)
U.S. Environmental Protection Agency, Region 10
1200 6th Avenue
Seattle, WA 98101

Telephone: (206) 553-6359
Fax: (206) 553-0119

e-mail: Shephard.Burt@epa.gov